

Patrick Jenkins

Research Interests

Robotics, Grounded Language, Machine Learning, Artificial Intelligence, Human Robot Interaction

Education

Master of Science, Computer Science

August 2020

University of Maryland, Baltimore County (UMBC), Baltimore, MD

Advisor: Dr. Cynthia Matuszek

Thesis: *Transfer Learning of Grounded Language Models for use in Robotic Systems*

Magna Cum Laude

Bachelor of Science, Computer Science

December 2015

Bachelor of Science, Mathematics

University of Maryland, Baltimore County (UMBC), Baltimore, MD

Cum Laude

Publications

- MASC 2020 Poster Presentation
GLD: A Grounded Language Dataset of Object Images and Descriptions in Natural Language Text and Speech
- *Grounded Language Learning from Five Data Modalities (In Submission)*

Work Experience

Engineer Cognitive Science, Northrop Grumman, Annapolis Junction, MD July 2018 - Aug 2019

- Designed and prototyped document classification DLL
- Trained machine learning algorithms to classify malicious internet packets
- Configured continuous integration pipeline for GitLab including testing and code quality
- Developed web system to retrieve and store phone data

Cryptologic Computer Scientist, National Security Agency, Ft Meade, MD Aug 2016 - June 2018

- | | |
|---|--|
| Computer and Analytic Sciences Research | - Researched security and adversarial examples in computer vision machine learning and neural networks |
| | - Presented work to developers and mathematicians at weekly machine learning technical exchanges |
| | - Implemented classic machine learning algorithms |
| Mathematics Research | - Researched and implemented state-of-the-art graph algorithms for community detection |

- Presented research successes to a large academic and industry expert audience at Graph Fest 2017
- Authored two papers documenting research methodology and future work

Software Developer, RDA Corp, Hunt Valley, MD

Jan 2016 - June 2016

- Developed software for Becton Dickinson's Kiestra lab automation
- Developed web application to pre-screen potential hires

Programming Intern, Insilico Medicine Inc, Baltimore, MD

June 2015 - August 2015

- Developed web applications for adverse drug reaction prediction deep learning research
- Provided database support for FDA Adverse Drug Reaction data

Technical Intern, BAE Systems Inc, Columbia, MD

Summers 2011-2014

- Supported quadcopter imaging research by programming flight paths and analyzing images
- Developed web application to parse sensor log data for quick response to issues in ARGUS systems

Teaching Experience

Graduate Teaching Assistant, UMBC, Fall 2019, Spring 2020

Undergraduate Artificial Intelligence, Spring 2020

- Taught multiple classes

Graduate Introduction to Robotics, Spring 2020

- Coordinated online classes

Graduate Introduction to Artificial Intelligence, Fall 2019

- Taught multiple classes
- Wrote and led exam review sessions
- Planned, developed, and graded class project

Math Tutor, UMBC, Fall 2015

- Instructed students in Calculus and Real Analysis

Talks and Presentations

Maryland Association of Student Councils (MASC) 2020

Poster presentation of "*GLD: A Grounded Language Dataset in Text and Speech*"

Graph Fest, July 21, 2017

Presented "*Dynamic Node Roles and Community Membership*"

Community detection graph algorithm research

TEDxUMBC, September 13, 2014

Presented "*Write this Down: Juggling and Math*"

An exploration of the mathematics and notation of juggling

Service

Pi Kappa Phi Fraternity, Academic Chair, UMBC

- Created academic policy for the fraternity

Music Director, Mama's Boys Acapella, UMBC

- Led and taught singing rehearsals
- Planned shows at UMBC and other universities

Volunteer, Maiden Choice School, Baltimore, MD

- Guided children with disabilities to accomplish activities and chores